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ABSTRACT

Through a review of the literature, this paper describes current practices in compensatory reading programs, (particularly Title I and Chapter 1 programs), offers evidence on how such practices evolved, identifies program features that may be questionable, and suggests ways to redesign such programs to enhance their effectiveness. The first section of the paper discusses the delivery of instruction in compensatory programs, with subsections covering program structure, curriculum, instructional time, and instructional focus. The second section reviews how compensatory instruction might be delivered, while the third section considers program integration with core curriculum. The fourth section examines characteristics of effective remedial instruction in the areas of setting, curriculum, instruction, time, students, and evaluation. The paper concludes that compensatory education programs, particularly Title I and Chapter 1 programs, have remained static for too long with too little systematic investigation by members of the reading profession. (FL)

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Policy constraints and effective compensatory reading instruction: a review

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Introduction. The largest compensatory educational effort in the United States is the federally funded Title 1 of the Elementary and Secondary Educational Act of 1965 (ESEA)) now revised as Chapter 1 of the Educational Consolidation and Improvement Act of 1981 (ECIA)). (For purposes of simplicity throughout this paper I will refer to both programs as Title 1). In the 1982 fiscal year almost 3 billion dollars was allocated by the federal government to about 13,000 school districts in Title 1 funding (Stonehill and Groves, 1983). This funding was allocated "to provide financial assistance to local education agencies serving areas with high concentrations of children from low-income families to expand and improve their educational programs" (Kirst and Jung, 1980, p. 4). The delivery of extra-program services provided by this funding is so widespread that nearly 90 percent of all school districts receive some funding and in these districts nearly 20 percent of the elementary school students receive some services. Of those students served by the Title 1 program 85 percent are provided with instruction in reading or language arts for between two and a half (Allington, 1980) and three and a half hours per week, (National Institute of Education, 1977b), the vast majority in "pull-out" compensatory instruction classes.

After nearly two decades of Title 1 services critics of the program now abound. Cooley (1981) argues "On balance, Title 1 is not producing the level of achievement impact that people had hoped it would have (p. 300)." While Levin (1977) suggests that "the ostensible inability of Title 1 programs to create even a nominal impact on student scores in basic skills seems to be endemic to the program (P. 156)." Kaestle and Smith (1982) note that Title 1 achievement "gains are modest in comparison with the original promise of Title 1 (p. 398)." Doss and Holley (1982) present convincing evidence that the dismantling of the traditional Title 1 program structures, including special class reading teachers, will produce a more positive effect on achievement than attempting to simply modify the traditional program structure that was

sketched above.

The development, implementation and evaluation of Title 1 programs has produced controversy and a large literature on policy issues that have effected education agencies and their personnel at federal, state and local levels. Much of this literature is unfortunately unfamiliar to reading educators. The controversies on various facets of program policies are wideranging and are well summarized elsewhere (e.g. Jeffrey, 1978; McLaughlin, 1975; Vaneckc, Ames & Archambault, 1980). However, because of the unprecedented size of the program, the impact of Title I policies on the delivery of compensatory reading instruction has been enormous. That is, the current structure of compensatory reading programs has seldom been guided by research on effective instructional practice and more often influenced by policies designed to ease evaluation of compliance to program regulations. In this review I attempt to describe current practices in compensatory reading programs, offer evidence on how such practices evolved, identify program features that may be problematic and suggest ways we might redesign compensatory reading instruction to enhance its effectiveness. Special problems such as overlaps of Title 1 with PL94-142 and interference of Title 1 with the local core curriculum will also be discussed. The general format will be to address a topic, review pertinent evidence and issues and then provide recommendations for the delivery of effective compensatory instruction in reading.

The delivery of instruction in compensatory programs.

Program structure. The most popular program structure for the delivery of clinical/remedial instruction is the "pull-out" class. According to Glass and Smith (1977) 84 percent of remedial reading instruction is offered on a "pull-out" basis where the eligible children leave their regular classroom to

participate at a second location, usually within the same school building. They note that there seems to be no observable differences between the majority who are "pulled-out" and the minority who receive the remedial instruction in their regular classrooms environment suggesting students are not "pulled-out" because of differentially prescribed instructional needs.

If students are not "pulled-out" based on some differential instructional needs criteria, why then do the vast majority of remedial students travel to another location to receive their remedial instruction? The most commonly cited reason is that such a program structure results from overly "conservative and restrictive interpretations" of federal program regulations (Vanecko, Ames & Archambault, 1980). Because the legal framework that encompasses Title 1 has required that "Federal funds made available under this title...be used to supplement, and increase...the levels of funds...and in no case, as to supplant such funds from non-federal sources..."(NIE, 1977a) the creation of a "pull-out" structure produces a more easily followed "audit trail" (Shulman, 1983). Simply put, a "pull-out" program makes it easier for local and state education personnel to verify compliance with the "supplement not supplant" regulation. However, it is clear that the use of the "pull-out" program/structure was not motivated by pedagogical concerns, adequate empirical evidence or learning theory but rather by the perceptions, or misperceptions, of federal program requirements by local and state education personnel (Vanecko, et, al, 1980). This situation was not improved by "confusion (at the U.S. Office of Education) about the appropriate interpretation of the supplementation provisions..."(NIE, 1977a, p. 39). While it now seems obvious that there are several alternatives to "pull-out" structures that comply with the regulations there seems still little movement away from that traditional program design.

Curriculum. The "pull-out" program design structure is perhaps the most frequently criticized aspect of Title 1 services. Kaestle and Smith (1982) note that primarily as a result of this factor, Title 1 segregation from the classroom is very nearly complete. A result of this separation is the fragmentation of the school experience for Title 1 recipients. These students are often required to "deal simultaneously with reading and mathematics instruction from two different textbooks, taught in two different styles ..."(p. 400). Johnston, Allington, and Afflerbach (in press) found this fragmentation was quite pervasive in Title 1 programs with little congruence between classroom instruction and remedial instruction. That is, few remedial students received instruction that supplemented their core classroom reading curriculum but rather were most generally taught by classroom and remedial teachers who expressed different beliefs about student needs and offered different objectives as targets for instruction. Too often the reading materials used in the two locations, classroom and clinic, represented distinctly different models of the reading process. The result is that remedial students, who too often experience "cognitive confusion" (Vernon, 1957), are offered instruction that seems likely to further confuse the learner. Reading strategies that work well in code-oriented reading programs will often not work well in meaning-oriented reading programs with their lack of strict vocabulary control. The remedial student who receives instruction in a code-oriented program in the classroom and a meaning-oriented program in the remedial setting is presented two different sets of strategies and skills, neither of which works particularly well with the other program. If the teaching is accompanied by only partial learning in these situations one produces a reader with greater cognitive confusion than should be found if instruction in both settings were congruent.

The segregation from the classroom is further evident in the fact that half of the reading teachers interviewed were unable to identify even the basal series used in any given remedial students' classroom and more than two-thirds could not identify the specific reader or level of textbook the student was placed in. Further, only one classroom teacher in five could identify the reading material a remedial student from his or her classroom was using in the remedial setting (Johnston, et, al, in press). These data, collected in several districts in two states and those reported by Kimbrough and Hill (1981), suggest that the fragmentation of the educational experience and the segregation of remedial instruction from the classroom program is pervasive.

This segregation and fragmentation is undoubtedly a result, in large part, of the use of "pull-out" remedial programs. Nonetheless, one can imagine a "pull-out" program that does offer a congruent instructional setting, therefore the occurrence of separate curricula in compensatory programs must be related to other factors as well. In particular, two different, but related, factors seem likely candidates. The first, the "modality preference hypothesis" (Johnston, et, al, in press), is best represented by the general belief that remedial readers need to be taught differently. This belief seems to stem from the assumption that poor readers receive the same instruction as good readers yet they fail to attain normal achievement levels, hence a different teaching method, or style, is called for. This point of view is well represented in reading and learning disability textbooks but receives virtually no theoretical or empirical support in the research literature (Allington, 1983; Heibert, 1983; Johnston, et, al, in press, Rohwer, 1980). Yet a significant number of educators continue to agree with the basic premise that quite different instruction is generally appropriate in remedial

settings. One would think that even if the lack of theoretical or empirical evidence is discounted, educators would question the rationality of this hypothesis given a half-century of "disappointingly small" (Cooley, 1981) achievement gains produced by programs representing this point of view.

A second factor which seems to have lead to the widepsread practice of using a different curriculum and different materials in remedial classes is a basic misunderstanding of the nature of the federal requirement that remedial instruction " supplement not supplant" the regular reading instruction. Very simply, some educators have interpreted this aspect of the regulations to mean that "supplementary materials" must be used - that it is a violation of the regulations to provide additional remedial instruction in the same curricular materials used in the classroom core curriculum. This remains the case. I provided forty school administrators who had some responsibility for Title 1 programs with four brief remedial programs scenarios (see Table I) and asked them to identify whether the program as described would comply with the "supplement not supplant" rule. It should be noted that each of the four would, in fact, comply with that regulation, assuming compliance also with "comparability" and "excess cost" provisions.

Insert Table I here

Scenarios number 2 and 4, both of which have the reading teacher offering additional instruction on the classroom core curriculum materials, garnered the most incorrect responses with over one-third of the administrators indicating that in each of these scenarios the "supplement not supplant" rule was being violated. In other words these administrators believed that additional instruction on the core curriculum by a reading teacher would

violate the federal guidelines. This, of course, is wholly inaccurate since the federal regulations refer not at all to the curricular content but, rather, to the fact that the district must be able to demonstrate that the Title 1 funds provided additional instruction, over and above that, received by the non-recipient children (Elmore & McLaughlin, 1982). Again, however, the source of this misinterpretation may lie higher up the administrative network since the federal program administrators have been inconsistent in their standards for asserting that programs were non-compliant (NIE, 1977a).

Whatever the reason, many educators accept the principle that remedial instruction should be different from the instruction offered in the classroom reading program. This belief seems to have resulted in a fragmentation of the learning-to-read-experience for thost students who probably need the most consistent and clear instruction. Nevertheless, the remedial reader does get additional instruction, or at least that is the common belief.

Instructional Time. Unfortunately for the remedial reader the data on this aspect of remedial instruction is quite consistent and clear in indicating that most often additional instructional time is not necessarily available (Allington, 1980). The most damaging evidence is provided by Lignon and Doss (1982) based on observations of about 1000 students for whole school days; "Title 1 instructional services, and probably those of other compensatory programs, are not supplementary (i.e., in addition to) to regular instruction. Instead instructional time provided by the regular program is supplanted by the instructional time provided by the Title 1 program. In other words, the quantity of instruction received by a Title 1 student is not greater than the quantity received by a non-Title 1 student...Students served by more than one compensatory program during a school year actually receive less instructional time than those served by only one or none." (p. 3).

This evidence is mirrored by that provided by Vanecko, et, al (1980). They found that in nine of the thirteen districts they studied, students in Title 1 schools actually received less reading and language arts instruction that students in non-Title 1 schools (an average of about 7 minutes a day less). In eleven of the thirteen districts Title 1 students received less classroom reading and language arts instruction than non-Title 1 students. When the amount of Title I instruction was added to the classroom instructional time the Title I students received about 10 percent more instruction that non-Title 1 students. These findings are echoed by Kimbrough and Hill (1981) who found that federally funded compensatory education programs tended to replace core classroom instruction, especially in reading. Whenever the remedial program is offered during the regular school day some instruction must be missed, it seems, although about one-third of the schools report that their Title 1 students miss no instruction during "pull-out" compensatory instruction! Those remaining report that between 15 and 20 percent of the students miss the classroom instruction in each of the following areas; reading, language arts, social studies, science or study time (NIE, 1977b). The sad fact is that too often the Title 1 student does not receive any significant increase in the amount of reading instruction provided - even when it seems as though that commonly occurring remedial reading period should be adding up additional instructional time.

Instructional Focus. What does remedial instruction look like? What kind of instruction is offfered and how efficiently is it delivered? Here we have only sparse data reported in the research literature, primarily because few investigations of Title 1 programs have actually observed remedial instruction but have relied instead on teacher interview, questionnaires, and project reports. Quirk, Trisman, Nalin and Weinberg (1975) do report on an

observational study of 135 compensatory teachers in twenty-one districts. They found that these teachers spent the largest proportion of class time, about one-third, on student management, nearly one-quarter on word recognition activities with little time devoted to comprehension activities (12%) or silent reading (2%). Sargent (1981) observed resource room teachers and found that only about one-half of the teacher's time was spent in instructional activities.

Leinhardt (1980) reported on a comparison of transition room reading instruction with regular primary grade reading instruction. The transition rooms were designed for high-risk students in grade 1. In this study some schools had transition rooms while other similar schools in the district did not. The transition rooms had an adult-student ratio three times higher than the regular primary classrooms. While a transition room is different from a reading resource room, the basic objectives were by and large the same, as was the adult-student ratio. In this situation, where the objective was more intensive instruction, the students in the transition rooms actually received two and one-half hours less reading instruction per week than did students in regular classes. In addition, they received 50 percent less "test-relevant" instruction and moved at about one-half the pace of their peers in the regular classrooms. Classroom teachers taught and reviewed sight words twice as frequently and had students read materials four times as often as did transition room teachers. In the end students eligible for the transition room, but placed in the regular classroom program instead, had higher reading achievement, even though they had not received any of the "advantages" of the transition room placement. Meyers (1969) found a similar situation in transition room effects, or the lack of them. There is a question, then, on whether compensatory educational programs in general actually provide

effective and efficient learning environments.

Recently, I mapped, from audio-tape recordings, the time spent by three different reading teachers in remedial class sessions. Nearly one-third of the time scheduled was spent in "set-up" activities prior to the beginning of any instructional activity. That is, from the time the previous group was released until the next group began receiving instruction, nearly ten of the thirty minute period passed. During this time the remedial teacher waited for students to arrive, which most ultimately did, though in one case the teacher finally traveled to the classroom to get the students who were scheduled. As the children arrived, various non-instructional, usually social, interactions occurred. Informal discussions, for instance, of how the day was going, how a member of the family was, comments on clothing, etc., all took place. The important point is not the exact nature of these activities but rather that what took place had little to do with direct instruction for the purpose of remedying the reading deficiency that was the reason the students and teachers were there.

Some of the inefficiency observed can be traced directly to the "pull-out" nature of the instructional settings. Arlin (1979) discusses classroom transitions between reading groups or content lessons and notes there is wide variability in how well different classroom teachers accomplish shifting from one group, or content, to another. He discusses "time drift" wherein students are not engaged in academic work but rather are attending to social concerns, personal movements, others' movements and so on. Significant amounts of instructional time can be lost on inefficient transitions which result in time "drifting away". Something similar seems to be at work in "pull-out" programs particularly with the travel time from one location to another. Also, the lack of any explicit signal for the learner that indicates that it is time to

shift locations leads to a rather inefficient "drifting in" of remedial clients. Recently (Allington, 1984) I calculated that as much as fifteen minutes per day are lost for instruction in the time that it takes a student to a) stop working and pack up for a resource room, travel there, arrive, greet teacher, get materials out, get seated and finally, begin to work, plus time to b) stop working in resource room, put materials away, say good-bye, travel back to room, get classroom materials out and, finally, begin working again. All this assumes minimal teacher management or coercion is needed to get these activities done efficiently. This daily fifteen minute "transition time" to the pull-out program and back results in nearly forty hours per academic year lost for instruction. This forty hours could be used to provide sixteen weeks of 30 minutes a day of instruction - if that transition time was available.

Summary. The most common type of remedial reading program is one which is designed around "pull-out" instruction where remedial services are delivered by a special reading teacher. This remedial instruction is typically independent and different from the classroom core reading instruction, employing different materials and teaching methods. In fact, more often than not, neither the classroom teacher nor the reading teacher will know what instruction is like that the other offers. Though generally considered "extra" assistance, the remedial instruction often supplants a significant portion of the classroom reading or language arts instruction, such that the remedial student rarely receives a substantially greater amount of actual reading and language arts instructional time. Contributing to this problem is the loss of time from instruction due to transition activities in each setting. These factors all seem to contribute to the feeling that "after almost a decade of intervention, the Title 1 program stands primarily as a

symbol of national concern for the poor rather than as a viable response to their needs." (Kaestle and Smith, 1982, p. 400).

How compensatory instruction might be delivered.

Committment and leadership. Compensatory instruction for readers who are experiencing difficulty in acquiring reading ability is a good idea. But as Goldenberg (1969) points out good ideas will not always be operationalized so as to ensure that the original objectives will be met. In fact, at times, good ideas are operationalized in such a way so as to ensure that the original objectives cannot be met. In the case of Title 1 it seems that program developers have worried about all the wrong things and have spent very little time in designing, or operationalizing, programs that focus on what we know about increasing instructional effectiveness. This has led, in some instances, to programs that cannot achieve their original objectives - to significantly increase the reading achievement of poor readers.

Leinhardt and Pallay (1982) review a number of studies of special and remedial education and conclude that "the variables which are important for successful student outcomes can occur in most settings...it is the issue of effective practices, not setting, that deserves the attention of educators." (p.557). I would concur, and note that even though millions of dollars have been spent evaluating Title 1, the search has been for "overall achievement effects" (Cooley, 1981) rather than for characteristics of effective remedial instruction (Cooley and Leinhardt, 1980). As Light and Smith (1971) noted, we know some programs are successful, some are terribly ineffective, but most make an impact, even if it is "disappointingly small."

The fact that there is a paucity of empirical evidence on characteristics of effective remedial instruction (Wang, 1980) makes offering suggestions on how more effective programs could be designed a somewhat tentative exercise.

Though we have relatively few good reports to guide us, the consistency of the characteristics reported provides a reasonable base for prescriptions.

A particularly appealing starting point for reshaping compensatory or remedial reading programs is to examine the level of committment the district or school has made to the program. Edmonds (1979) argued that he required "that an effective school bring children of the poor to those minimal masteries of basic skills that now describe minimally successful pupil performance for the children of the middle-class." (p. 3). The simple expenditure of federal funds for Title 1 is a very low level indicator of committment. Several examinations of schools which were producing above-average reading achievement with disadvantaged students, students' whose characteristics would normally suggest a below-average achievement level, have without exception argued that strong instructional leadership from the prinicipal or the reading specialist is a critical factor in attaining the high achivement patterns (Edmonds, 1979; Mackenzie, 1983; New York State Office of Performance Review, 1974; Weber, 1971; Wilder, 1978). This leadership was evident in several ways. Both the leader and the instructional staff held high expectations for the effects of their instruction. That is, the staff in these schools felt significantly more of their students would be on grade level, would graduate from high school or would attend college than the staff at comparable but low-achieving schools. Another area in which leadership was exhibited was staff development. Inservice training was offered which focused specifically on developing effective learning environments, including training in classroom management and organization. Effective school leaders had achieved a public consensus among their staff on what the primary objectives were and these goals were clear, attainable, and measureable. Finally, these schools monitored their performance and used the

evaluation data to improve the instructional program. This final characteristic may be of particular interest in relation to compensatory programs since David (1981) found that most local school personnel perceived the required Title 1 evaluation as "one of the many hoops to go through to receive funds." (p. 28). Her interview study suggests only a very few reading teachers or Title 1 directors view program evaluations as a basis for judging the merits of their program or as a guide for improving that program. She found that when negative aspects of evaluations were cited local personnel generally either discounted the value of the evaluation or attempted to explain it away. As one of her respondents said, "We're not going to lose any sleep over whether or not the results show effectiveness" (p. 28). In this case, and, unfortunately, too many others, the level of committment seemingly ends with the expenditure of the federal funds available. As long as some services were provided the committment had been met. Whether the services positively effect the original goal, improved reading achievement, seemed unimportant.

Improving local evaluations. Even in those districts where Title 1 evaluations are used as evidence of remedial program success the criteria employed are often neatly biased in favor of the program. For instance, the most common method for demonstrating program effectiveness is to show Fall to Spring growth on an acheivement test. Unfortunately, any growth achieved is usually used as evidence of the success. However, it would be a fairer assessment if two changes were made; 1) measure Fall to Fall achievement patterns, and 2) subtract average learning rate, from student past history, from the Fall to Fall gain. These two adaptations would serve to give a less biased picture of actual improvement that might be attributed to the influence of the compensatory program. Some would argue that it is unfair to measure

Fall to Fall since one then has to account for "summer reading loss". The other side of the coin is that the Fall to Spring assessments do not hold the program accountable for a lack of long-term effects. Subtracting average learning rate prior to program intervention is but a crude way to attempt to get at what additional achievement effects result from the additional instruction. The lack of adequate causal models of achievement hinders full specification of achievement gains attributable to program interventions but current work in this areas is promising (Cooley, 1981). Until these models are developed however, we can, for example, at least subtract the seven month average gain per year that a particular student has achieved prior to the program intervention from his nine month gain after the program was inititated. This two month achievement effect, which may be a generous average for a Title 1 program student, will be a more accurate assessment of program effects than is the common pattern of attributing all nine months growth to the intervention of the program. Thompson and Smith (1982) report that in their analysis of over 2300 Title 1 student achievement scores over a two year period there was no sustained effect for Title 1. The gain evident in Fall to Spring testing was not evident in Fall to Fall testing. Thus, even the two month gain noted above might be erased if both criteria were employed. In my review of a number of public school systems' Title 1 evaluations available through the ERIC system, I found no report that used either suggestion. Because of the bias inherent in the common evaluation procedure, few of these reports are included in this review.

An alternative method of assessing program effects has been suggested by Rosenbaum (1980). He suggests that since the goal of most remedial, compensatory and special education programs is "normalization" of achievement or behavior, one could assess a program by determining "its success at

returning slower students to regular ability groups" (p. 368). Since I found no studies or evaluation reports that used this criteria for measuring program effectiveness, little else can be said. However, the high rate of continuing eligibility of Title 1 students across several years does suggest that few programs would be considered successful were this criteria accepted.

My reason for belaboring this point stems from two characteristics of effective schools noted earlier; clear goals and frequent monitoring. Perhaps the very broad goal of "improving reading performance", which seems generally accepted, should be revised to an annual goal of "return at least one-half the students to their regular classroom with no further need for remediation." This goal seems to be implicit in Clay's (1979) rather more successful approach to remedial instruction. In addition, sub-goals could specify certain proportions of students, or particular students, to be returned to their classrooms within shorter periods of time than one academic year. This adaptation would require more frequent monitoring of student progress toward a different goal. My prescriptions are but very general starting points, but then goals are the targets and perhaps our efforts have been aimed at the wrong target for too long.

Program integration with core curriculum.

As important as the level of committment and leadership to program effectiveness is the relationship of the compensatory program to the core curriculum. Various authors have noted the segregation of Title 1 programs and staff from the core educational services (Cohen, 1982; Johnston, et al, in press; Kaestle and Smith, 1982; Leinhardt and Pallay, 1982; Lignon and Doss, 1982). This segregation is seen as having several potential negative effects. First, classroom teachers often consider themselves relieved of the responsibility for low-achievement in Title 1 students: that now becomes

someone else's problem. This perception may result in the reduced classroom reading instruction reported for many Title 1 students. As the classroom teacher's feeling of responsibility decreases so does the instructional effort in the classroom.

A second potential effect of the segregation is that little change occurs in core curriculum instruction since weaknesses are supposedly remedied by the remedial instruction. Thus, the "curriculum disability" (Elkind, 198X) continues with few modifications. Further, since segregation tends to reduce communication there is only a minimal flow of information between reading specialists and classroom teachers. If neither knows what the other is doing it will be inordinately difficult to learn one from another. In point of fact, Cohen (1982) reports that school districts receiving Title 1 funds had greater numbers of specialized staff members (e.g. reading teachers) but less program coordination than districts who did not receive such funds.

A third effect of the segregation is "interference" with the local core instruction. Interference (Kimbrough and Hill, 1981) is defined as "conflict between categorical programs and the core local curriculum" (P. 2). Interference is present when the compensatory program causes unintended problems for classroom teachers in providing coherent and coordinated instruction. These problems range from scheduling difficulties, to staff conflicts, to clashes in instructional methods and philosophies. Glass and Smith (1977) report that the number of "pull-outs" a day negatively correlates with class achievement. Cooley and Leinhardt (1980), however, report that the number of "pull-outs" had no impact on achievement of either those "pulled-out" or those who were not. Suffice it to say that scheduling classroom instruction around the "pull-out" schedules is a concern of the classroom teacher. In addition, the lack of communication between the

remedial and classroom teacher (Cohen, Intilli and Robbins, 1978; Johnston, et al, in press) seems to lead to interference, at least in terms of student learning. Remedial students who are placed in a meaning-oriented basal series (e.g. Scott Foresman, Reading Systems) in the classroom and a code-oriented program (e.g. SRA, Distar Reading) in the remedial setting are going to be confused. The strategies they acquire in either setting will not be particulary useful in the other. In fact, such a contrast could easily result in partial learning or mislearning of important components of either system.

Segregation of the remedial program and staff from the core curriculum does not have to happen, regardless of type of program structure. While "pull-out" programs seem to foster segregation and its concomitant ill-effects, there are "pull-out" programs that are well coordinated and integrated into the regular school environment. One aspect of the leadership characteristic of effective schools is the development of an integrated whole-school instructional effort. While little empirical support can be found for congruent instructional emphasis in classroom and remedial programs, a strong theoretical argument can be made (Johnston, et al, in press). One is hardpressed to find a learning theory that suggests that uncoordinated and incongruent instruction is more appropriate than coordinated and congruent teaching.

Classroom teachers seem to want better coordination of efforts. In the interviews reported by Johnston, et al (in press) teachers reported wanting more joint meeting times with the reading teachers. In two surveys of teachers' preference for "pull-out" or in-class compensatory instruction, significant numbers of classroom teachers indicated a preference for in-class remedial programs (Davis, 1982; Hayes, 1983). While not near unanimity, many of these teachers seem to support the use of an in-class remediation program

which would logically seem to reduce segregation between programs. Rauhala (1982) describes such a program in which the reading teacher spends from 2 to 8 hours per week in a classroom providing instructional assistance in cooperation with the classroom teacher. On the other hand, Doss and Holley (1982) reported that a similar program was not easily accomplished due primarily to the resistance of classroom teachers who found it uncomfortable to have another teacher in the room. The lesson perhaps is that cooperation is not easily implemented, even if mandated. Teachers must adapt to new professional roles and such adaptation takes time and training.

The leadership of the building principal or reading director is quite powerful on this segregation issue. In the Johnston, et al (in press) interviews it was found that three our of four remedial programs reflected the bias of the program supervisor. When supervisors thought segregation and different curricula were appropriate, that state of affairs generally existed. When the program director thought that coordination and congruence of instruction was appropriate, that was generally what was found.

Effective instructional leadership is a rather vague prescription. However, clear, common, and measurable goals, frequent monitoring of progress toward those goals, and a belief in the importance of a coordinated and congruent instructional emphasis are each facets of this trait.

Opportunity to learn. Beyond effective instructional leadership, another common feature of effective compensatory education programs is a task-oriented environment that produces high levels of student engagement in academic work (Cooley and Leinhardt, 1980; Guthrie, Seifert and Kline, 1978; Kiesling, 1978; Lignon and Doss, 1982; Leinhardt and Pallay, 1982; Mackenzie, 1983; Stallings, 1980). Unfortunately, as Ysseldyke and Algozzine (1982) note, special and remedial education, especially "pull-out" instruction, has received little

systematic observational study. However, Leinhardt, Zigmond and Cooley (1981) report an observational study of the reading instruction offered learning disabled students. They note wide discrepancies in the amount of time these students spent in reading instruction. However, there was a strong relationship between amount of time students were engaged in teacher directed silent reading activities and reading growth. Little relationship existed between oral reading or workbook activity time and achievement gain. Stallings (1980) also reports strong corrleations between the amount time spent in teacher directed reading activities and student achievement in secondary school remedial reading classes. Time spent in making assignments and social interactions was negatively correlated with achievement. Cooley and Leinhardt (1980) studied 400 classrooms in an attempt to identify instructional practices that were particulary effective in producing reading achievement in disadvantaged urban children. They identified the "opportunity to learn" as the single most important variable. Expressed another way, children who were taught more learned more. The amount of time allocated for reading instruction was not as important as how effectively that time was used. How skills were taught was not as important as whether they were taught. The most powerful factor was the amount of time students spent actively working on reading tasks, particularly working with teachers in direct instructional settings. Similarly, Lignon and Doss (1982) note that when instructional time increases in classrooms so does student achievement. Finally, Kiesling (1978) found increased instructional time produced greater gains for lower achievement students than for pupils reading at or above grade level.

The question, of course, is how much time should be allocated for reading instruction for remedial readers? How much time in classroom reading

instruction? How much additional remedial instructional time? In a meta-analysis of fifteen studies of programs for poor readers, Guthrie, Seifert and Kline (1978) provided what clues we have on this latter question. They found that at least fifty hours of additional instruction was needed even when provided in a situation where the tutor is a trained specialist and the adult to student ration is small, no greater than 1:4. Two studies that reported significant remedial programs gains had adult-student ratios of 1:1 and 1:3 and provided four to five hours a week of remedial tutoring. Similar in many respects is Clay's (1979) report of a successful early school remedial program. Her program was designed to identify children in grade one who were significantly behind their peers in reading development. These children were provided two individual tutorial sessions of forty minutes in length, twice weekly. This additional tutorial work resulted in about two-thirds of the participants being discontinued after three or four months of tutoring, with their reading improved to the point where they could rejoin their classroom instructional program and maintain that pace without the supplementary instruction. Clay suggests that daily individual sessions may be required for some children and would probably be beneficial to all who experience difficulty in acquiring reading skill.

We have only these bits of evidence on how much additional remedial instructional time is needed. However, the question cannot be easily answered in isolation in any event. Other factors, including group size, what is taught, and how effectively it is taught, are important determinants of the outcome one can expect from the allocation of x amount of additional remedial time. In fact, Cooley and Leinhardt (1980) found little relationship in the amount of time allocated for such instruction and ultimate achievement affects.

Of further concern is the classroom reading instruction. The evidence (e.g. Lignon and Doss, 1982) that remedial instruction, when offered, typically results in a decrease in the classroom instructional time suggests that added remedial instruction is not always "added" instruction (Vanecko Ames, and Archambualt, 1980). We have much evidence that the amount of time allocated in classroom for reading instruction varies widely, even in the same school at the same grade level (for instance, Berliner [1981] reports a range of 47 to 118 minutes a day). In addition, Hiatt (1979) reports that only 20 percent of the school day was used in "acts of imparting skills and knowledge" in the primary grade classrooms she observed. In reading the average amount of instruction equalled only 16.3 minutes per day in an instructional setting. The remaining time was spent evaluating, giving procedural directions, inducing cooperation, managing, and so on. Given the variability in the amount of classroom reading instruction and in the quality of that instruction it becomes clear that there is no simmple answer to the question of how much instructional time - in the regular classroom and in the remedial program - is necessary, or optimal, for achieving success. It does seem clear, however, that students who are achieving poorly will benefit from the allocation of additional instructional time (Keisling, 1978; Guthrie, Martuza and Seifer, 1979).

Summary. Problems of ineffective leadership, inadequate committment program segregations and supplanted instruction all have worked to undermine compensatory programs. However, it seems more important to attned to how compensatory programs affect the students' opportunity to learn. The available evidence suggest that current compensatory programs leave considerable to be desired in this area, although this state of affairs may stem from the misguided focus of much of the program evaluation activity.

Opportunity to learn has been narrowly defined as allocated time in evalution studies. While time needs to be allocated for instruction it is more important to ask "What goes on during the reading instructional sessions"? Rather than simply looking at the amount of time that has been allocated for classroom or remedial instruction we need to begin to look at a) whether students are actively engaged in learning activities, b) the relationship of the teaching and learning activities in the classroom and clinic to each other and to the program goals, and c) at the quality of instruction offered in both settings (Borg, 1980; Brophy and Evertson, 1981; Duffy, 1980). Unfortunately, no studies were found that have investigated compensatory reading instruction in these ways. We have some strong clues from research which looks at effective classroom instructional practices but there exists no adequate empirical base for developing firm prescriptions for a supplementary remedial component.

Nonetheless let me offer an informed opinion about those factors which most directly affect the success of the compensatory and remedial instruction.

Some Characteristics of Effective Remedial Instruction

Setting. As Leinhardt and Pallay (1982) note, setting is, by and large, a rather insignificant feature of compensatory instruction. Far more important than setting is what occurs in the setting prescribed. Nonetheless, I would suggest that "pull-out" settings of all types can be problematic. Such programs seem to foster segregation of the remedial effort from the mainstream of the school educational effort. As Glass and Smith (1977) argue, "Pupils pulled out of regular classrooms would have to receive remarkably effective compensatory programs to offset the potential risks incurred." (p. 41). It is not that effective and efficient remedial instruction cannot occur in a "pull-out" program but rather that it is simply quite difficult to achieve.

On the other hand, Doss and Holley (1982) and Lortie (1976) comment on the practical difficulty of implementing a "floating reading teacher" structure, where the reading teacher provides instruction to the remedial students in their regular classrooms. Neither classroom teachers nor reading teachers readily adapt to the new demands placed on both parties. A shift to a hybrid model, where the reading teacher works in both locations some of the time, may facilitate integration of the remedial instruction without all of the problems and resistance that some have identified.

There are those (Lignon and Doss, 1982) that argue for a complete redesign of remedial education, including the elimination of reading teachers, opting to use the compensatory funding to employ additional classroom teachers, thereby reducing the student-teacher ratio in Title I schools. While there is evidence to support the efficacy of such a strategy there seems to still be ample support for the continued need for reading teachers, who have additional training and experience, to facilitate the delivery of more effective and efficient compensatory instruction than can be delivered by classroom teachers. Reading teachers will be under increasing pressure to justify their positions, particularly to their classroom teacher peers. If the preferences reported by Davis (1982) Doss and Holley (1982), and Hayes (1983) can be generalized to all classroom teachers, there is substantial reason for concern (Milofsky, 1974). In these reports classroom teachers indicated no strong committment to continued remedial reading instruction, at least as currently offered in their schools. Of further concern is the fact that only half of the compensatory teachers surveyed felt that compensatory reading programs were "definitely" worth the money expended (Allington, 1980).

Curriculum. There seems adequate theoretical argument for a remedial curriculum that is closely tied to the classroom core reading curriculum

(Bloom, 1976; Johnston, et, al, in press). On the other hand, there exists little theoretical support for maintaining the status quo - a distinct and separate remedial curriculum replete with special materials, separate scope and sequence of objectives, and so on. Little empirical support exists for coordinated remedial instruction, primarily because it seems to occur relatively rarely. Empirical evidence for a separate remedial curriculum consists primarily of two decades of "disappointly small" gains from remedial programs organized in this manner.

Adopting the suggestion of coordinated compensatory/classroom instruction requires closer cooperation between the two teacher-participants than has generally been the case in the past. Moving away from a total reliance on "pull-out" instruction for remedial services would seem to be one way to facilitate such coordination. The teacher-participants will have to cooperatively plan more regularly than is now normally the case (Johnston, et al, in press). Another rather simple strategy for achieving more coordination even with a "pull-out" program, is the "traveling notebook". Basically both the classroom teacher and the reading teacher jot notes in the notebook on a daily basis. The notebook travels with the compensatory student or group of students from classroom to reading resource room and back. In their daily notes each teacher simply states what material was completed in each instructional setting. Special problems can be noted as well. For instance, the classroom teacher could simply note that the remedial students silently read a particular story and answered several questions. In addition, the success, or lack of it, in the question answering could be noted. The reading teacher could then choose to work on free-recall of the story structure through retelling or work on identifying cause-effect relationships in text (supposing, of course, that had been the source of problems). The reading

teacher would sketch the content of instruction offered in the remedial setting and send the notebook back to the classroom teacher. This strategy will not eliminate the need for face-to-face meetings but it does facilitate the information flow about the instruction offered, instructional needs of the remedial sudents, and helps to generate feeling of cooperative effort between the teacher-participants.

Instruction. Now imagine a hybrid in-class/pull-out program with a coordinated instructional effort in which the reading teacher supports and extends the instruction offered on the core reading curriculum by the classroom teacher. Given this, what would we want the remedial instruction to look like?

First, and foremost, the remedial instruction needs to be achievement focused. An emphasis on developing self-concept or improved attitudes about school just does not produce achievement gains that are as impressive as instruction that is focused clearly on improving reading abilities.

Second, the instruction should involve as much direct teaching as can be packed into the time available. Durkin (1978) and Duffy and McIntyre(1982), among others, have reported that classroom teachers offer little explicit teaching of either comprehension or word analysis skills and strategies during classroom reading instruction. This obviously is a most pertinent role for the reading teacher. Direct teaching seems primarily to involve explanation and modelling of the skills and strategies necessary to develop reading proficiency (Duffy and Roehler, 1982; Rosenshine, 1979).

Third, remedial instruction should be strategy oriented. Basically, this involves offering instruction in utilization strategies, monitoring strategies and the like. Many remedial students seem to have acquired skills knowledge equivalent to younger readers (Allington and Ohnmacht, 1979) but have not

developed effective and efficient strategies for utilizing such skills in any integrated manner. Brown and Palincsar (1982) and Johnston (1984) offer examples of such strategy-based teaching. Relatedly, Johnston (1984) and Wang (1983) discuss the importance of developing remedial students' sense of personal responsibility for learning. Too often remedial students seem to have not developed a good sense of personal responsibility. Routines for developing self-management are available and should be integrated into remedial efforts.

Fourth, remedial instruction should be efficient. By efficient I simply mean that it should commence on schedule, maintain a smooth activity flow so that students do not spend time waiting for directions or task checks or instruction. A guiding question here is, "How much more can be accomplished?"

Fifth, remedial instruction must be of appropriate difficulty as well as appropriate content. Much evidence has accumulated that suggest students need wide experience with reading tasks that are performed at a near error-free level (Beck, 1981; Gambrell, Wilson and Gantt, 1981; Jorgenson, 1977). When error rates rise students become increasingly distractible and are less likely to remain engaged in their academic work.

Finally, I could suggest that remedial teachers consider assigning homework on a daily basis. As Thomas, Kemmerer, and Monk (1979) note, we need to consider out-of-school time for learning and practice as well as available in-school time. If remedial students are to overcome their deficits the instructional effort should attempt to take advantage of every opportunity to effect achievement. Daily out-of-school reading assignments is one such strategy that is too seldom used.

Time. Given what we know of the importance of available time for learning one might question why anyone ever supposed that remedial efforts could simply be

squeezed into the fixed-length school day and succeed. Simply, remedial students most typically have no additional time for learning or instruction when remedial programs operate during the school day. Remedial instruction must necessarily supplant some other instructional time if scheduled during the school day, reports to the contrary notwithstanding (Archambault and St. Pierre, 1980).

As a general rule remedial instructional time should not come from student classroom reading or language arts time. Unfortunately, one then has to decide what else will be missed and, whatever the choice, the remedial student will not receive instruction in the full core curriculum.

On the matter of amount of time allocated for remedial instruction there is no clear answer. As noted before, however, this is primarily because other variables, such as content of instruction, are more directly related to achievement. However, the time allocated for remediation must be ample enough to allow for effective instructional delivery. The time allocated however is also tied to several other program variables such as student-teacher ratio and instructional quality.

Students. We have some evidence to suggest that low student-teacher ratios (1:1 to 1:4) produce better achievement in remedial settings (Clay, 1979; Guthrie, et al, 1978). One factor that may be integral to this finding is that when teachers, including reading teachers, instruct in groups it becomes difficult for them to attend to individual needs, even in planning (Shavelson and Stern, 1981). Clay (1979) argues that it is imperative that a 1:1 ratio be maintained in order to focus instruction on each individual learners instructional confusions and instructional needs. While this 1:1 ratio may seem an unlikely luxury to many reading teachers, twice weekly thirty minute tutorial sessions would allow nearly thirty students to be serviced, assuming

a five and a half hour instructional day. This figure is near the average student load of remedial reading teachers. If students are returned to the classroom with no further need for remediation during the school year, as in Clay's (1979) study, additional students could be added to the remedial class rolls.

Identification of students in need of remediation should be rather straightforward. When remedial services are limited though, by resource limitations or regulation, the matter may become somewhat less so. Ideally identification would involve a combination of formal assessment data and teacher referral plus observation of the potential students during their classroom reading instruction. Probably the most neglected population are those students identified as learning disabled. Birman (1981) reports that Title I eligible learning disabled students rarely received Title I services. She argues this has occurred because many state and local education agencies enforce policies based upon a misinterpretation of the federal regulations for either or both Title I and PL94-142. She did find some schools in which nearly all learning disabled students who were eligible for Title I were receiving those services. In those few instances the availablity of Title I remedial instruction was considered essential to successful mainstreaming efforts.

All economically disadvantaged students, including those identified as handicapped under PL94-142, are entitled to Tile I remedial services (Breglio, Hinckley, & Beal, 1978). Likewise, if a reading disability exists in a handicapped student, eligibility for remedial services should not be denied simply because of identification as a handicapped learner.

Evaluation. Most often evaluation of remedial programs have been poorly done and rarely used by remedial program staff (David, 1981). Rather than continue

in this manner evaluations need to be redirected in three ways.

First, if a measure of the general program effect is desired pre- and posttesting should be a Fall-to-Fall or Spring-to-Spring comparison. Beyond looking for an overall achievement effect, the evaluation should also focus on the number of students released from the remedial program and returned to the regular classroom with no further need of remedial assistance.

Second, the progress of individual students needs to be continously monitored (Edmonds, 1979). This monitoring should encompass regular classroom performance as well as performance in the remedial instruction. Monitoring of this type should be informal, in the sense that student performance on daily tasks is the focus, rather than performance on standardized achievement tests (Clay, 1979). Accurate records of content taught and mastered are necessary features for demonstrating the effectiveness and efficiency of remedial instruction (Airasian and Madaus, 1983).

Finally, evaluation should examine whether the remedial treatment is increasing the amount of curricular content mastered. Remedial students are so classified because they have not maintained a standard learning pace. In other words, they have a record of past learning that indicates a reduced learning rate. However, the pacing of instruction, the rate at which new skills and strategies are presented, is a critical factor in learning rate (Barr, 1982). This is not to suggest that the pace of instruction should be increased willy-nilly but rather that the pacing of instruction deserves evaluation. When instruction is coordinated between the classroom and reading teacher then pacing of instruction becomes a part of the cooperative planning.

A Final Option. Given that remedial programs are designed to provide additional instruction and that finding additional time during the school day is literally impossible, more consideration should be given to more widespread

use of after-school and summer remedial efforts. Either of these time periods allow for true increases in the amount of instructional time that is made available for developing reading ability (Stanford Research Institute, 1977). Another advantage is the potential of summer programs for alleviating the "summer reading loss" so often reported for remedial students. If additional time is necessary for instruction in order for students to advance through the core reading curriculum, then after-school and summer reading instructional programs need serious consideration.

Summary

Identifying characteristics of effective remedial instruction requires some effort since few empirical reports have focused on this aspect of schooling. Currently critics of remedial programs abound, a situation not unrelated to the lack of available evidence supporting current practices. Compensatory education programs, particularly Title I, have remained static for too long with too little systematic investigation by those most directly involved, members of the reading profession. Unfortunately, not only is empirical support for the traditional remedial effort somewhat less than compelling, but there are indications that other educators, particularly classroom teachers, have a moderate to low level of support for continuation of such programs as currently organized. It is now time for all of us involved in compensatory reading programs to evaluate our efforts and the outcomes we achieve. Compensatory reading programs can be improved; it is time to initiate the changes indicated.

Table I: Percentage of school administrators indicating a scenario was not in compliance with the "supplement not supplant" rule of Title 1 regulations (N=40).

Scenario	Percent responding "not compliant"
1. A special reading teacher offers remedial instruction in the regular classroom after the student's classroom reading period. This additional instruction is in reading materials different from that used in the regular classroom reading instruction.	25%
2. A special reading teacher offers remedial instruction in the reading resource room, away from the regular classroom after the student's classroom reading period. This additional instruction is in the same reading material that were used in the regular classroom reading instruction.	35%
3. A special reading teacher offers remedial instruction in the reading resource room, away from the regular classroom after the student's classroom reading period. This additional instruction is in reading materials different from that used in the regular classroom reading instruction.	20%
4. A special reading teacher offers remedial instruction in the regular classroom after the student's classroom reading period. This additional instruction is in the same reading materials that were used in the regular classroom reading instruction.	37%

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